

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME Expanded Rubber & Plastics Corp.		EMERGENCY TELEPHONE NO. (213) 321-4260
ADDRESS (Number, Street, City, State, and ZIP Code) 14000 So. Western Ave., Gardena CA 90249		
CHEMICAL NAME AND SYNONYMS Polyester Prepolymer		TRADE NAME AND SYNONYMS Stafoam
CHEMICAL FAMILY Polyurethane Isocyanate Compound	FORMULA AA 610, Component T DAC # DPM 6117	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Toluene Diisocyanate <i>820 isomer.</i>	8.18	0.02 ppm
Polyester Polyol <i>(resin - OH groups)</i>		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H ₂ O=1) @ 25°C	~ 1.2
VAPOR PRESSURE (mm Hg.)		PERCENT. VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (____ = 1)	
SOLUBILITY IN WATER	Reacts with water		
APPEARANCE AND ODOR	Water white to pale yellow, pungent odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	270°F, C.O.C.	FLAMMABLE LIMITS	Fire Point 295°F	LeI	UeI
EXTINGUISHING MEDIA	Water fog, CO ₂ , Dry chemical				
SPECIAL FIRE FIGHTING PROCEDURES People who are fighting TDI fires must be protected against TDI and nitrogen dioxide vapors and should wear a self-contained breathing apparatus.					
UNUSUAL FIRE AND EXPLOSION HAZARDS Avoid water contamination in closed containers or confined spaces; CO ₂ gas will be generated.					

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

Maximum atmospheric concentration for 8 hr. working day is 0.02 ppm.

EFFECTS OF OVEREXPOSURE

Mucous membrane irritation and tightness of the chest.

Irritation of the respiratory tract, coughing, headache, and shortness of breath

Exposure can lead to allergenic sensitivity.

EMERGENCY AND FIRST AID PROCEDURES

Eyes: Flush eyes with water for 15 min., & consult a physician. Skin: wash with water & tincture of green soap. For severe exposure, use safety shower & consult a physician. Inhalation: Remove to uncontaminated area, administer oxygen if needed. Ingestion: Do not induce vomiting, give milk or water to reduce corrosiveness and get medical help. If vomiting should occur, more water should be given in a further attempt to dilute the material.

SECTION VI - REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

INCOMPATIBILITY (Materials to avoid)

Water, alcohols, strong bases, carboxylic acids and metal compounds.

HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of nitrogen, carbon monoxide, traces of hydrogen cyanide.

HAZARDOUS POLYMERIZATION

MAY OCCUR

X

CONDITIONS TO AVOID Contact with moisture and other materials which react with isocyanates.

WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Spilled chemicals should be covered with sawdust and treated with dilute ammonium hydroxide or alcohol and water in an open container before disposal.

WASTE DISPOSAL METHOD

Waste disposal should be in accordance with federal, state, and local environmental control regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) Canister type gas mask, equipped for organic vapors; masks with external air source, or self contained breathing apparatus.

VENTILATION

LOCAL EXHAUST

SPECIAL

MECHANICAL (General) To maintain vapor concentration below TLV.

OTHER

PROTECTIVE GLOVES Chemically resistant rubber or plastic gloves.

EYE PROTECTION Protective goggles, suitable for liquid handling.

OTHER PROTECTIVE EQUIPMENT Eye wash stations and safety showers should be provided in work areas together with containers of tincture of green soap.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Must be stored in tightly closed containers and protected from moisture. Avoid temperatures above 90°F (32°C) or below 70°F (21°C.)

OTHER PRECAUTIONS

This product reacts with water & other substances to provide CO₂ gas which can cause sealed containers to expand, and possibly rupture. Do not reseal container if contamination is suspected.

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CHEMICAL NAME AND SYNONYMS Polyester Polyol		TRADE NAME AND SYNONYMS Stafoam
CHEMICAL FAMILY Polyurethane Polyhydroxyl Compound	FORMULA AA 610, Component R DAC # DPM 6117	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Polyol Blend		
Water		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H ₂ O=1)	1.0-1.2
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____=1)	
SOLUBILITY IN WATER			
APPEARANCE AND ODOR			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) 300°F Pensky Martin C.C.	FLAMMABLE LIMITS	Let	Uet
EXTINGUISHING MEDIA Water			
SPECIAL FIRE FIGHTING PROCEDURES Self contained breathing apparatus.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

Not established

EFFECTS OF OVEREXPOSURE

None observed. This type of polyester may be regarded as physiologically innocuous.

EMERGENCY AND FIRST AID PROCEDURES

Skin: Flush with soap and water

Eyes: Flush with copious amounts of water

SECTION VI - REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

INCOMPATIBILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

Aliphatic Fragments, CO, CO₂, H₂O

HAZARDOUS
POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Absorb with oil absorbing compounding and flush with large volumes of hot water.

With proper precautions, solvents such as methylene chloride may be used.

WASTE DISPOSAL METHOD

Waste material may be incinerated under conditions which meet federal state and local environmental control regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

None required

VENTILATION

LOCAL EXHAUST

SPECIAL

No special requirements

MECHANICAL (General)

OTHER

PROTECTIVE GLOVES

Rubber gloves for cleanliness

EYE PROTECTION

Liquid goggles

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

This material is hygroscopic and containers should be tightly closed to prevent

contamination with foreign material and moisture.

OTHER PRECAUTIONS

Recommended storage temperature is 65° - 85°F